REMARKS

Claims 6, 9 and 12 have been rejected under 35 USC 112, second paragraph, for lack of antecedent basis. The claims have been amended to correct the noted deficiencies.

Claims 2 and 8 have been rejected under 35 USC 102(e) as anticipated by Chang (U.S. Patent No. 6,111,673). The rejections are respectfully traversed.

Chang discloses a high-throughput, low-latency next generation internet network using optical tag switching. Within the network packet, routing information is embedded in the same channel or wavelength as the data payload so that both the optical header and the data payload propagate through network elements with the same path and the associated delays. The optical signaling header for optical tag switching is generated in a microprocessor and emitted together with the original IP packet at the baseband (Fig. 7, col. 17, lns. 26-36). The signaling header is mixed in an RF mixer utilizing a local oscillator. Afterwards, both the mixed header from the mixer and the original packet are combined in a combiner and, in turn, the output of the combiner is encoded to an optical wavelength channel via an optical modulator having a laser as a source of modulation. Chang neither teaches nor suggests placing a route signal both in front of and after the data packet, nor using carrier signals having a carrier frequency of half the data transmission rate to produce the route signals nor using frequency mixes having frequencies including audio frequencies, as required by the claimed invention (as amended).

Since the recited structure and method are not disclosed by the applied reference, claims 2 and 8 are patentable.

Claims 1, 3-7 and 10-12 have been rejected under 35 USC 103(a) as unpatentable over Chang in view of various combinations of Chang-Hasnain (U.S. Patent No. 5,541,756), Yao (U.S. Patent No. 5,917,179) and Cotter (U.S. Patent No. 5,912,753). The rejections are respectfully traversed for the same reasons presented in the arguments above, and for the following reasons.

Chang-Hasnain discloses an apparatus and method for routing optical signals through wavelength-coding in a self-routed wavelength addressable network, wherein routing tags (routing tag 14 + reset tag 16) are assigned to the optical signals. The routing tag 14 preferably consists of one or more header pulses which are chosen from among header wavelengths and are placed in front of the data 12. The optical signal also has a reset tag 16 containing preferably one rest pulse R having a unique reset wavelength. Also, the reference fails to disclose using carrier signals having a carrier frequency of half the data transmission rate to produce the route signals or using frequency mixes having frequencies including audio frequencies, as required by the claimed invention (as amended).

Yao discloses Brillouin opto-electronic oscillators having at least one Brillouin feedback loop based on the Brillouin selective sideband amplification to provide a sufficient gain for the oscillator to start and sustain an electro-optic oscillation. Hence, an optical modulator is used which is capable of imposing an RF modulation on the optical carrier signal by wither phase modulation or amplitude modulation. Yao fails to teach or suggest modulating a carrier signal using frequency mixes having frequencies including audio frequencies to produce a route signal (not a data transmission signal) where the carrier signal has a carrier frequency of half the data transmission rate, as required by the claimed invention (as amended).

The claimed invention relates to a method and transmission system for the automatic routing of data packets in an optical data packet stream that are each separated by a time interval including no data. Hence, the route information for each data packet is converted at the transmitter end into a n allocated frequency mix. Afterwards, a route signal is produced by modulating a carrier signal with the frequency mix, where a carrier frequency is selected for the route signals having half the data transmission rate and the frequency mixes include audio frequencies. At least one of the route signals produced is placed in front of and/or after at least one data packet. The data signal, including the route signal, is then transmitted to the receiver end. The route signal in terms of the frequency mixes used for the modulation is evaluated within, for example, an optical network node and the data packet is switched using the route information obtained from the frequency mixes modulate onto the carrier signal. Hence, the optical data packets, for example, within the optical

network node, can advantageously be switched or routed exclusively on the basis of the route information recovered by the evaluation of the route signal preceding and succeeding the optical data packets.

Since the recited method and structure are not disclosed by the applied references (either alone of in combination), claims 1, 3-7 and 10-12 are patentable.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket no. 449122000500. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

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Respectfully submitted,

By _____

Kevin R. Spivak
Registration No.: 43,148
MORRISON & FOERSTER LLP
1650 Tysons Blvd, Suite 300
McLean, Virginia 22102
(703) 760-7762 - Telephone
(703) 760-7777 - Facsimile